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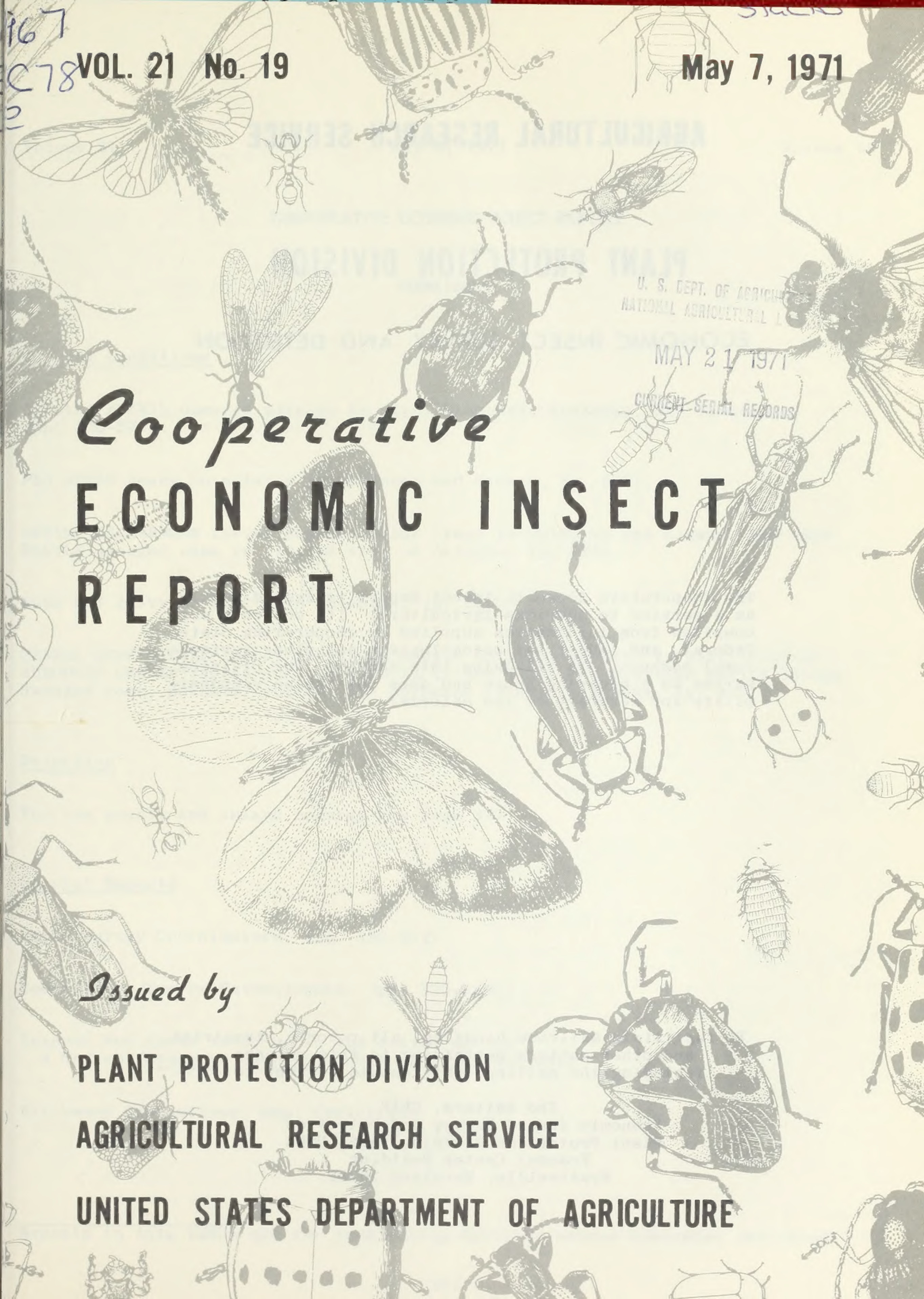

VOL. 21 No. 19

May 7, 1971

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MAY 21 1971
CURRENT SERIAL RECORDS

Cooperative
ECONOMIC INSECT REPORT

Issued by

PLANT PROTECTION DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PROTECTION DIVISION

ECONOMIC INSECT SURVEY AND DETECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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Volume 21 May 7, 1971 Number 19

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

ALFALFA WEEVIL damaged alfalfa in Utah, Missouri, Kentucky, and Tennessee. (pp. 320-321).

PEA APHID heavy on alfalfa in Oklahoma and Kansas. (p. 322).

SPRING CANKERWORM larvae damaged shade trees in Oklahoma and Kansas. ELM LEAF BEETLE damaged elms in limited area of Arizona. (p. 325).

HORN FLY heavy on cattle in Oklahoma. (p. 326).

CEREAL LEAF BEETLE larval feeding moderate to heavy on oats in West Virginia. EUROPEAN CHAFER larvae damaged alfalfa in New York. WHITEFRINGED BEETLE larvae damaged corn, peanuts, cotton, and soybeans in south Alabama. (p. 327).

Detection

For new county and island records see page 327.

Special Reports

State Survey Coordinators. (pp. 330-332).

Cooperative Survey Entomologist. (pp. 333-334).

Insects Not Known to Occur in the United States
A Scarab (Liogenys macropelma Bates). (pp. 335-336).

Witchweed Quarantines. Map. Centerfold.

Reports in this issue are for week ending April 30 unless otherwise indicated.

CONTENTS

Special Insects of Regional Significance....319

Insects Affecting

Corn, Sorghum, Sugarcane....320
Small Grains....320
Turf, Pastures, Rangeland....320
Forage Legumes....320
Cotton....322
Tobacco....323
Sugar Beets....323
Beans and Peas....323
General Vegetables....323
Deciduous Fruits and Nuts....323
Citrus....324
Small Fruits....324
Forest and Shade Trees....324
Man and Animals....326

Beneficial Insects....326
Federal and State Plant Protection Programs....327
Detection....327
Hawaii Insect Report....328
Light Trap Collections....329
State Survey Coordinators....330
Cooperative Survey Entomologist....333
Insects Not Known to Occur in the United States
A Scarab (Liogenys macropelma Bates)....335
Witchweed Quarantines. Map. Centerfold

NATIONAL WEATHER SERVICE'S 30-DAY OUTLOOK
MAY 1971

The National Weather Service's 30-day outlook for May is for temperatures to average below seasonal normals over the western half of the Nation except for near to above normal in the southern Plains. Above normal temperatures are indicated for the Gulf and south Atlantic Coast States and also for the Great Lakes region. In unspecified areas near normal temperatures are expected. Precipitation is expected to exceed normal over the northern half of both the Great Plains and the Mississippi Valley as well as the Upper Great Lakes and parts of the Great Basin. Subnormal totals are indicated for California, the southern Plateau, the southern Plains, the gulf coast and most of Florida. Elsewhere near normal precipitation amounts are in prospect.

Weather forecast given here is based on the official 30-day "Resume and Outlook" published twice a month by the National Weather Service. You can subscribe through the Superintendent of Documents, Washington, D.C. 20250. Price $5.00 a year.

WEATHER OF THE WEEK ENDING MAY 3

PRECIPITATION: Winter maintained its grip in the Rocky Mountains and western edge of the Great Plains. Fourteen inches of snow fell at Lander, Wyoming, in 18 hours ending at 8 a.m. Monday, April 26. Mixtures of snow and rain fell in lower elevations. Four inches of snow fell at Harrison and Chadron and 3 inches at Valentine all in Nebraska Monday. Thundershowers occurred over the central and southern Great Plains. Large hail fell from some of the thunderclouds. Hail as large as baseballs occurred in Enid, Oklahoma, vicinity Monday afternoon and De Soto, Missouri, area Tuesday afternoon. A tornado killed 1 person, injured several, and damaged numerous dwellings at Thompsonville, Illinois, Tuesday afternoon. During the night, tornadoes struck northeastern Arkansas and western and central portions of Kentucky and Tennessee. At midweek, showers became widespread from the Great Lakes to New England and southward to the middle Atlantic coast. Severe drought continued in southern Florida. Miami, Florida, has received 2.04 inches of rain in the past 6 months. This is less than one third as much rain as fell during previous driest November to April period at Miami; the few light showers that fell in Florida, Friday and Saturday, were of little consequence in

Weather of the week continued on page 328.

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

ARMY CUTWORM (Chorizagrotis auxiliaris) - NEBRASKA - Ranged 0-1 per linear foot of wheat in 4 Perkins County and 3 Chase County fields. (Keith, Moore). Larvae ranged 0-13 (averaged 2-3) per square foot of seedling alfalfa, 40 percent of stand destroyed. Expect activity to continue for 7-10 days. (Keith et al.). WYOMING - None in 4 wheatfields at Wheatland, Platte County. (Bitner). UTAH - Numerous on rangeland west of Utah Lake, Utah County. (Knowlton). COLORADO - Larvae of this species and Agrotis orthogonia (pale western cutworm) ranged 0-8 per linear foot on small grain in northeastern areas. (Johnson).

ARMYWORM (Pseudaletia unipuncta) - OHIO - First adult trapped April 11 at Wooster, Wayne County, 12 days earlier than in 1970 and 21 days earlier than in 1969. Small flights on April 11-20. (Ohio Agr. Dept.).

ASTER LEAFHOPPER (Macrosteles fascifrons) - MINNESOTA - Averaged 11 per 100 sweeps on bluegrass lawn in Ramsey County. Trace on rye in Sherburne and Dakota Counties. (Minn. Pest Rpt., Apr. 23). WISCONSIN - Counts about 1 per 100 sweeps in western areas, counts taken in 36°F weather and very wet fields. Assumed numbers much heavier. (Wis. Ins. Sur.). OKLAHOMA - Ranged 200-300 per square foot in one alfalfa field and 10-20 per square foot in another in Cotton County. (Okla. Coop. Sur.).

CORN LEAF APHID (Rhopalosiphum maidis) - ARIZONA - Averaged 150 per linear foot in one field of sorghum at Laveen, Maricopa County. Up to 46 per whorl in Yuma County field. (Ariz. Coop. Sur.).

GREENBUG (Schizaphis graminum) - WASHINGTON - None collected on 21 sticky traps in Benton and Franklin Counties April 16-26, apparently absent in most wheat; 2 apterae per 100 sweeps in 1 field in each county. (Klostermeyer). ARIZONA - Ranged 20-300 (averaged 200) per linear foot of sorghum in 5 fields of mixed plant heights; heaviest counts on smaller plants in Maricopa County. Indications of migration from harding off small grain and volunteer Johnson grass. Very few beneficial insects noted. (Ariz. Coop. Sur.). OKLAHOMA - Still on wheat in scattered areas. Moderate in Hughes County and light in Cimarron County. (Okla. Coop. Sur.). KANSAS - Generally light on wheat in limited surveys April 17-23 in southeast district. Surveys of wheat in south-central and southwest districts, indicate light populations with occasional signs of heavier infestations, lady beetles (including larvae) abundant and appeared to be controlling greenbug. (Bell). TENNESSEE - Light to moderate on all grain surveyed. Very light damage observed. Beneficial insects keeping populations under control. (Gordon).

SPOTTED ALFALFA APHID (Therioaphis maculata) - KANSAS - Up to 40 per leaflet along borders of 3 irrigated alfalfa fields in and around Ingalls, Gray County. Much leaflet yellowing and shedding noted. One field treated. Ranged as follows per 10 sweeps by county (3 fields per county): Cowley 0-50, Chautauqua 0, Montgomery 0, Sumner 0-50, Harper 0-50, Kingman 20-150, Reno 0-20, and Rice 0. (Bell). OKLAHOMA - Declined in Cotton County mainly due to predators. Rains during period April 26-30 reduced numbers in Kay and Noble Counties. Infestations heavy and scattered in Garvin County and light in Carter and Murray Counties. Very light, ranged up to 20 per square foot in Major, Texas, and Cimarron Counties. Up to 800 per square foot in Grady County. (Okla. Coop. Sur.). TEXAS - Heavy and localized, ranged 10-20 per alfalfa plant near Lubbock, Lubbock County. Damage noticeable near center of field examined. Parasites and predators noted. (Ward, Kiser, Apr. 23). NEW MEXICO - This species and Acyrthosiphon pisum (pea aphid) light in few fields in Lea and Dona Ana Counties. (Mathews, Campbell).

TOBACCO BUDWORM (Heliothis virescens) - ALABAMA - First moth of season at night light at Auburn, Lee County, April 27. (McQueen).

CORN, SORGHUM, SUGARCANE

EUROPEAN CORN BORER (Ostrinia nubilalis) - IOWA - First pupa of season observed April 28 in Boone County; earliest pupa observed in 22 years. Surveys for living borers in prepared fields showed 1,729 borers per acre, compared with 1,792 at same period in 1970 in Boone County. (Iowa Ins. Sur.). INDIANA - Larvae active in southwest district corn, no pupation due to dry weather. (Huber, Apr. 23). DELAWARE - Pupation of overwintering borers averages 18 percent in Sussex County. (Burbutis, Lesiewicz).

WESTERN CORN ROOTWORM (Diabrotica virgifera) - INDIANA - Single egg from 26 soil samples from 3 northwest district fields. (Gould, Apr. 23).

CORN FLEA BEETLE (Chaetocnema pulicaria) - MISSOURI - Ranged 1-4 per plant on seedling corn in southeast area (Houser, James). Ranged 10-40 per plant in marginal rows in central area. (Thomas). KENTUCKY - Adults ranged 3-8 per corn plant, damaged 5 percent of plants in stage 3 and 4 in western areas. (Barnett).

SEEDCORN MAGGOT (Hylemya platura) - NEW JERSEY - Collected 185 specimens from 3 sticky-board traps during period April 21-28 at Cedarville, Cumberland County. (Ins.-Dis. Newsltr.).

SMALL GRAINS

BROWN WHEAT MITE (Petrobia latens) - KANSAS - Light in drought-stressed wheat in south-central and southwest districts south of line including southwest Harper, southern Barber, southwest Kiowa, Ford, Gray, southwest Finney, and including all of Harper and Hamilton Counties. (Bell). OKLAHOMA - Moderate on wheat in Cimarron County. (Okla. Coop. Sur.). COLORADO - Observed on some small grains in northeastern areas, wet weather helping reduce damage. (Johnson). NEVADA - Additional 140 acres in Lovelock area, Pershing County, treated to control ,heavy infestations. (Stitt).

WHEAT CURL MITE (Aceria tulipae) - KANSAS - Symptoms of wheat streak mosaic in wheatfields located in north-central Finney, north-central Kearny, south-central Wichita (bordering counties) and in an area including eastern Rush, northeastern Barton, and southwestern Russell Counties. (Bell).

PALE WESTERN CUTWORM (Agrotis orthogonia) - NEBRASKA - Larvae ranged 0-2 per row foot of wheat in 4 Perkins County fields, ranged 0-1 per row foot in 3 Chase County fields. Heavy rains and light snow reduced larval activity in panhandle and southwest area. (Keith, Moore). WYOMING - None in 4 wheatfields near Wheatland, Platte County. (Bitner).

ENGLISH GRAIN APHID (Macrosiphum avenae) - WASHINGTON - Counts low but increasing on wheat in Franklin and Benton Counties. (Klostermeyer).

TURF, PASTURES, RANGELAND

BANKS GRASS MITE (Oligonychus pratensis) - NEVADA - Heavy on 40 acres of timothy at Minden, Douglas County, controlled by irrigation. (Munk).

MOLE CRICKETS (Scapteriscus spp.) - FLORIDA - Caused severe damage to a 40-acre Bahia grass pasture in Hamilton County. (Andrews).

FORAGE LEGUMES

ALFALFA WEEVIL (Hypera postica) - NEVADA - Occasional larva on alfalfa in southern Washoe County. Plant growth 2-3 weeks behind normal. (Nev. Coop. Rpt.). UTAH - Damaged alfalfa at Hurricane and few fields in St. George and Santa Clara area, Washington County. Larval counts 3-35 per sweep, adults moderate. (Davis, Knowlton). OKLAHOMA - Larvae collected on alfalfa: 1 in Guymon area, Texas

County, 6 in Boise City area, Cimarron County, and 1 larva and 1 adult in Ringwood area, Major County. These are new county records. Larval counts of 500 per 10 sweeps of alfalfa in Delaware County. Ranged 20-50 per square foot in Cotton County and 40-100 per square foot in Grady County, pupae and adults in both areas. Heavy in Hughes, Seminole, and Kingfisher Counties. Moderate to heavy in Sequoyah and Garvin Counties. Pupating in Garvin County. Adults heavy (few larvae) in Murray and Carter Counties. Moderate in Adair, Mayes, Muskogee, Bryan, and Tillman Counties and light in Tulsa, Noble, and Pawnee Counties. Ranged 8-20 per square foot in Canadian County. (Okla. Coop. Sur.). KANSAS - Specimens taken in the following new counties on alfalfa: Kingman, Reno, Sedgwick, Harper, Sumner, Cowley, Chautauqua, Elk, Greenwood, Wilson, Riley, and Pottawatomie. Determinations by K.O. Bell. Treatment applied in Labette County field. Surveys underway to determine extent of infestations. (Bell). MISSOURI - Larvae ranged 35-1,650 per 10 sweeps in central, east-central, and northeast areas. Terminal damage observed on 70 to 100 percent of plants. Terminal damage 20 percent in north-central area fields. (Hanning). Complete defoliation in few fields in southeast and south-central areas. Pupation underway in southern areas. (Huggans). ILLINOIS - Populations on alfalfa nearing peak in southern third of State, noticeable feeding damage as far north as Macoupin and Jasper Counties. Populations 10-14 days ahead of comparable populations of 1970. Economic (larvae 20 per sweep) in southern third and possibility in all portions of southern half of State within 7 days. Early instars found in all counties. (Ill. Ins. Sur.). INDIANA - No larval counts. Feeding noted on 3-20 percent of terminals in southern districts and larvae 1-4 per sweep in southwest district. Alfalfa growth slow in south-central district due to lack of moisture. (Huber et al., Apr. 23).

NEW YORK - Recovered first adult of H. postica of season in alfalfa in Tompkins County on April 19. Sticky-board flight traps erected April 20, no adults yet. (N.Y. Wkly. Rpt.). NEW JERSEY - Adults and larvae averaged 1 per 15 sweeps of alfalfa in Cumberland County. No feeding injury observed in many southern fields to date. No serious problems anticipated this year. (Ins.-Dis. Newsltr.). DELAWARE - Larvae ranged up to 4 per 50 sweeps of alfalfa, very light injury. (Burbutis, Lesiewicz). MARYLAND - Adults averaged less than 1 per 20 sweeps of alfalfa statewide. Damaged tips still less than 1 per 100. (U. Md., Ent. Dept.). KENTUCKY - Larval counts of 1,840 per 100 sweeps of alfalfa in Anderson, Spencer, and Shelby Counties. Adults per 100 sweeps by county: 18 in Spencer and 3 in Anderson. Percent damage by county: up to 50 in some fields in Anderson, 25 in Hardin, and 30 in Christian. (Barnett). TENNESSEE - Surveys indicate weevils active in all areas. Many fields still at control levels. Controls applied and effective in most cases. (Gordon, Swindol). ARKANSAS - Adults ranged 300-340 per 100 sweeps of alfalfa in Mississippi County on April 15. The following are new county records: Izard, Newton, Lawrence, Monroe, Prairie, White, Woodruff, and Cleburne. (Dumas). Adults and larvae recovered from crimson clover in Sebastian County on April 20. (Boyer, Jones). Collected on crimson clover in following new counties: Ouachita, Union, Clark, Columbia, Nevada, Hot Spring, Garland, Perry, Saline, and Franklin. (Dumas). MISSISSIPPI - Damage decreased on alfalfa in Marshall, Pontotoc, and Oktibbeha Counties due to increased pupation. Peak pupation expected during period April 26-30. (Sartor).

A WEEVIL (Hypera sp.) - NEVADA - Surveys indicate infestations in Las Vegas area, Clark County may be confined to southeast section as surveys negative in northwest section and very little alfalfa grown in remaining areas. (Hoff).

ALFALFA SNOUT BEETLE (Brachyrhinus ligustici) - NEW YORK - Larvae common in sod in Wayne County south of Wolcott. (N.Y. Wkly. Rpt., Apr. 23).

ALFALFA LOOPER (Autographa californica) - WASHINGTON - Late instars on several acres of tarweed in Walla Walla County, April 22. (Halfhill).

ALFALFA CATERPILLAR (Colias eurytheme) - COLORADO - Adults in alfalfa in Arkansas Valley. (Hantsbarger).

NOCTUID MOTHS - OKLAHOMA - First Trichoplusia ni (cabbage looper) larva of season on alfalfa in Payne County. Plathypena scabra (green cloverworm) larvae heavy on alfalfa in Mayes County. (Okla. Coop. Sur.).

PEA APHID (Acyrthosiphon pisum) - WASHINGTON - Nymphs and adults up to 100 per sweep on 8 to 10-inch tall alfalfa in Walla Walla County; 5 percent alates on April 22. (Halfhill). UTAH - Ranged 2-16 per sweep of alfalfa at Hurricane and Santa Clara, Washington County. Populations lower in central and northern areas. (Davis, Knowlton). OKLAHOMA - Ranged 250-400 per 10 sweeps of alfalfa in Delaware County. Heavy in Mayes, Pawnee, and Muskogee Counties. Ranged per square foot by county: 3-250 in Texas, 50-75 in Cimarron, 15-20 in Major, and up to 30 in Grady. Light in Tulsa and Murray Counties. (Okla. Coop. Sur.). KANSAS - Very heavy in 3 irrigated alfalfa fields near Ingalls, Gray County, one field treated. Estimated up to 12,000 per 10 sweeps in certain areas of fields. No yellowing of leaves noted. Counts per 10 sweeps by county (3 fields unless noted) as follows: Ford 10 (2 fields), Edwards 225 (1 field), Pawnee 200 (1 field), Cowley 500-1,000, Chautauqua 400-5,000+, Montgomery 250-1,000, Bourbon 55-145, Allen 125-300, Woodson 36-98, Greenwood 10-56, and Butler 11-490. (Bell, Apr. 23). Current counts per 10 sweeps of alfalfa by county as follows (3 fields per county): Montgomery 650-1,200, Chautuaqua 250-1,000, Cowley 100-600, Butler 150-400, Greenwood 275-1,000, Sumner 500-1,000, Harper 150-200, Kingman 250-350, Sedgwick 200-400, Lyon 350-800, Riley 400-500, and Pottawatomie 200-400. (Bell). DELAWARE - Ranged 4-67 per 50 sweeps of alfalfa. Heaviest in Kent County. (Burbutis, Lesiewicz). KENTUCKY - Adults averaged 6 per 100 sweeps of alfalfa in central areas. (Barnett).

MEADOW SPITTLEBUG (Philaenus spumarius) - WISCONSIN - Hatch underway in southwestern quadrant. (Wis. Ins. Sur.). ILLINOIS - Hatch underway and occasional froth masses observed. In southern one-third of State froth masses still number less than 1 per 1,000 stems of alfalfa. (Ill. Ins. Sur.).

LYGUS BUGS (Lygus spp.) - NEVADA - Averaged 1 per sweep or less in Virgin Valley, Clark County, alfalfa. (Bechtel, Zoller). Ranged 12-15 per sweep in Moapa Valley. (Bechtel et al.).

A LEAFHOPPER (Agallia constricta) - KENTUCKY - Adults averaged 54 per 100 sweeps of alfalfa in Spencer County. (Barnett).

BROWN WHEAT MITE (Petrobia latens) - NEW MEXICO - Infestations spotty in southern Eddy County alfalfa. Infested alfalfa short and wilted. (Mathews). OKLAHOMA - Ranged 100-200 per square foot in scattered alfalfa in Cimarron County. (Okla. Coop. Sur.).

WESTERN FLOWER THRIPS (Frankliniella occidentalis) - NEVADA - Populations reduced on alfalfa in Moapa Valley, Clark County, but heavily damaged buds and leaves indicate earlier heavy infestation. Alfalfa in area has heavy thrips and damage yearly in early spring. (Bechtel et al.).

THRIPS - NEW MEXICO - Unspecified thrips caused terminal growth to curl on alfalfa in Lea County. (Mathews). Caused minor damage in Dona Ana County alfalfa. (Riddle).

COTTON

BOLL WEEVIL (Anthonomus grandis) - ALABAMA - Weevil counts on 8 cotton farms in Monroe and Shelby Counties negative. (McQueen).

BEET ARMYWORM (Spodoptera exigua) - CALIFORNIA - Larvae 4 per leaf on scattered plants in 70 acre planting at Niland, Imperial County. (Cal. Coop. Rpt.).

COTTON APHID (Aphis gossypii) - ARIZONA - Averaging 5 per plant on cotton in 2 cotyledon to 5 leaf stage in Avondale and Laveen areas, Maricopa County. (Ariz. Coop. Sur.).

TOBACCO

TOBACCO BUDWORM (Heliothis virescens) - FLORIDA - Infested 10-25 percent of tobacco plants inspected; one 30-acre field 25 percent infested based on 600 plants checked; light to moderate on flue-cured tobacco in Hamilton County. (Strayer).

SUGAR BEETS

BEET ARMYWORM (Spodoptera exigua) - ARIZONA - One field treated on Yuma Mesa, Yuma County. (Ariz. Coop. Sur.).

GREEN PEACH APHID (Myzus persicae) - ARIZONA - Some fields required treatments in Salt River Valley, Maricopa County. (Ariz. Coop. Sur.).

SUGARBEET WIREWORM (Limonius californicus) - IDAHO - First adults of season April 26 as compared with April 29, 1970 at Parma, Canyon County. (Scott).

SUGARBEET ROOT MAGGOT (Tetanops myopaeformis) - IDAHO - Collections from established infestation east of Minidoka railroad station, Blaine County, on April 29, 1971. This is a new county record. (Peay).

BEANS AND PEAS

TWOSPOTTED SPIDER MITE (Tetranychus urticae) - FLORIDA - All stages severe on 30 percent of pole beans in 60-acre field near Homestead, Dade County, April 13. (Butler).

GENERAL VEGETABLES

CABBAGE LOOPER (Thrichoplusia ni) - NEW MEXICO - Requiring controls in Dona Ana County lettuce. (Campbell).

DECIDUOUS FRUITS AND NUTS

CODLING MOTH (Laspeyresia pomonella) - WASHINGTON - First moth in sex-lure trap in apple orchard at full bloom at Parker, Yakima County, April 27. (Hudson).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - ALABAMA - Larvae on new growth and on 5-15 percent of small peaches in orchard in Lee County. (Balch et al.). WASHINGTON - First moths in bait trap in peach orchard April 26 near Sawyer, Yakima County. (Johnson).

REDBANDED LEAFROLLER (Argyrotaenia velutinana) - MARYLAND - Hatched. Counts below economic levels throughout State. (U. Md., Ent. Dept.). NEW YORK - First males in pheromone traps on April 20 in Ontario and Orleans Counties indicated start of spring flight. (N.Y. Wkly. Rpt.).

WESTERN TENT CATERPILLAR (Malacosoma californicum pluviale) - OREGON - Single tent and first instars on apple April 19-23 at west Salem, Polk County; development 14 days later than in 1970. First tents in 1970 noted April 10 in Multnomah and Marion Counties. (Westcott).

CALIFORNIA PEARSLUG (Pristiphora abbreviata) - WASHINGTON - Eggs deposited in 10-20 percent of spur leaves of pears in late petal fall; first larvae observed; adults at Wapato and Toppenish, Yakima County. (Johnson).

PEAR PSYLLA (Psylla pyricola) - WASHINGTON - First nymphs on cluster bud stage of pears near Tieton, Yakima County, April 26. (Johnson).

APHIDS - CONNECTICUT - Rhopalosiphum fitchii (apple grain aphid) on apple buds in Windham, New London, New Haven, and Tolland Counties. (Savos, Apr. 27). MARYLAND - Dysaphis plantaginea (rosy apple aphid) hatched throughout State; counts light. Eriosoma lanigerum (woolly apple aphid) light to moderate in orchard at Hancock, Washington County. In half of egg laying scars of periodical cicadas. (U. Md., Ent. Dept.). NEVADA - E. lanigerum heavy on apple tree nursery stock at Las Vegas, Clark County. (Zoller). UTAH - Myzus persicae (green peach aphid) curled peach foliage in unsprayed peach orchards in "Dixie" area of Washington County. (Davis, Knowlton).

EUROPEAN RED MITE (Panonychus ulmi) - MARYLAND - Hatched at Hancock, Washington County. Counts light. (U. Md., Ent. Dept.).

TWOSPOTTED SPIDER MITE (Tetranychus urticae) - COLORADO - Eggs and adults moderate on lower limbs of apple and pear trees in Mesa County. First Metaseiulus occidentalis (a phytoseiid mite) found in orchards April 22 in Mesa County. (Bulla).

MCDANIEL SPIDER MITE (Tetranychus mcdanieli) - WASHINGTON - Laid eggs on lower parts of apple trees at west Wapato, Yakima County. (Gregorich).

PEAR RUST MITE (Epitrimerus pyri) - IDAHO - Infested up to 100 percent of leaves in 0.5 acre of commercial pears in Owyhee County April 21. (Homan).

CITRUS

AN ARMORED SCALE (Unaspis citri) - FLORIDA - Adults localized on 1 of 4 sweet orange plants at Center Hill, Sumter County, April 15, 1971. (Chambliss, Venable). This is a new county record. (Fla. Coop. Sur.).

SMALL FRUITS

GRAPE FLEA BEETLE (Altica chalybea) - ALABAMA - Larvae heavy; defoliated some grapevines completely on Dauphine Island, Mobile County. (Seibels).

STRAWBERRY WEEVIL (Anthonomus signatus) - MARYLAND - First adults less than 1 per 10 row yards in 4 acres of strawberries near Clinton, Prince Georges County. (U. Md., Ent. Dept.).

STRAWBERRY LEAFROLLER (Ancylis comptana fragariae) - WASHINGTON - Larvae damaged 10-15 percent of terminal leaves in 30 acres of strawberries near George, Grant County; Tetranychus urticae (twospotted spider mite) on 3-5 percent of foliage. (Hunter).

FOREST AND SHADE TREES

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - NORTH CAROLINA - Older activity areas in Piedmont decreasing. Activity heavy in extreme eastern area and extreme western area. (N.C. For. Pest Newsltr.).

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana) - OREGON - Annual nursery survey started April 5; about 25 percent complete as of April 23. Surveys negative on about 875,000 trees in east Multnomah County. (Larson et al.).

SPRUCE NEEDLEMINER (Taniva albolineana) - MONTANA - Webbed needles on several blue spruce at Havre, Hill County. (Pratt).

A CONIFER SAWFLY (Neodiprion taedae linearis) - TEXAS - Infested isolated stand of loblolly pine south of Madisonville, Madison County. Larvae infested 3 acres of pines and completely defoliated 1 acre. (Coster, Apr. 23). TENNESSEE - Hatched in east area in mid-April. Defoliation will probably be heavy again in previously infested area. (Applegate).

TEXAS LEAFCUTTING ANT (Atta texana) - TEXAS - Reproductives heavy following rains throughout east and central areas. Infestations in Burleson, Harris, Montgomery, Liberty, and Fayette Counties. (Green, Apr. 23).

BLACK PINELEAF SCALE (Nuculaspis californica) - CALIFORNIA - Heavy on ponderosa pine at 1,000 feet elevation in Shasta and Siskiyou Counties in Mount Shasta area. Few other small infestations in various locations including Crestline area of San Bernardino County. (Cal. Coop. Rpt.).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - TENNESSEE - Damaged black cherry in central area. Heavy in all areas and more damage expected during next 14-21 days. (Applegate, Gordon). WEST VIRGINIA - Tents averaged per tree: 2 in Marshall County; 3 in Wetzel County April 26. First larvae in Monongalia County April 22 and Lewis County April 27. (W. Va. Ins. Sur.). MICHIGAN - Larvae active past 10 days in Newaygo and Ingham Counties. Recent cold weather and unfolded foliage on most cherry trees could lead to significant mortality of new larvae. (Wallner).

FOREST TENT CATERPILLAR (Malacosoma disstria) - TEXAS - Numerous reports received from Matagorda, Goliad, Travis, Gonzales, and Bexar Counties. (Cole, Apr. 23). WEST VIRGINIA - First larval hatch in Marshall and Wetzel Counties April 27. (W. Va. Ins. Sur.).

WESTERN TENT CATERPILLAR (Malacosoma californicum fragile) - UTAH - Defoliated 10-80 percent of cottonwoods along Virgin River, from Hurricane to Santa Clara, in Washington County. (Davis, Knowlton).

A TENT CATERPILLAR (Malacosoma incurvum discoloratum) - NEVADA - Decreased over last several years. Only scattered, light damage in Moapa and Virgin Valleys, Clark County. (Zoller).

SPRING CANKERWORM (Paleacrita vernata) - OKLAHOMA - Heaviest of past 3 years. Up to 50 per terminal branch in scattered areas of Payne County. (Okla. Coop. Sur.). KANSAS - Larvae almost completely defoliated elms at Independence, Montgomery County. Up to 3 small larvae per leaf on American elm at Manhattan, Riley County; no serious defoliation. Small larvae averaged 1 per 10 leaves on hackberry. Light on one hackberry in Shawnee County. Larvae on elms in McPherson County. (Bell, Apr. 23). Tree sprayer at Topeka, Shawnee County, unable to keep up with volume of calls. Serious defoliation of shade trees at Arkansas City, Cowley County. (Bell). NORTH DAKOTA - Females and egg masses up to 8 per square foot on stucco wall at Minot, Ward County. (McBride). MICHIGAN - Moth activity of spring cankerworm plus Alsophila pometaria (fall cankerworm) last fall and this spring indicates minimal defoliation for this year. Declined drastically statewide past 2 years; will most likely remain at low level for some time. (Wallner).

ELM LEAF BEETLE (Pyrrhalta luteola) - ARIZONA - Chinese elms almost defoliated on U.S. Highway 66 at Winslow, Navajo County. (Ariz. Coop. Sur.). UTAH - Moderate skeletonizing of elm foliage at Hurricane, Washington County. (Davis, Knowlton). IDAHO - First adults and feeding on April 28 at Parma, Canyon County. (Scott). KANSAS - First eggs of season on American elms at Great Bend, Barton County. No adults at Manhattan, Riley County. (Bell).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - CALIFORNIA - Adults in elms at Gustine, Merced County. (Cal. Coop. Rpt.).

A PLANT BUG (Tropidosteptes pacificus) - CALIFORNIA - Nymphs and adults infesting Modesto ash trees unusually early at Fairfield, Solano County. Probably most damaging plant bug on ash trees in State. (Cal. Coop. Rpt.).

WOOLLY ALDER APHID (Prociphilus tessellatus) - WEST VIRGINIA - Tip damage on 20-25 percent of European alder on a Raleigh County strip mine reclamation site. (W. Va. Ins. Sur.).

MAN AND ANIMALS

SCREWWORM (Cochliomyia hominivorax) - Two cases reported in U.S. April 25 to May 1: TEXAS - Hidalgo. Total of 76 laboratory-confirmed cases reported in portion of Barrier Zone in Republic of Mexico as follows: Sonora 19, Chihuahua 10, Coahuila 5, Nuevo Leon 14, Tamaulipas 28. Total of 37 cases reported in Mexico south of Barrier Zone. Barrier Zone is area where eradication operation underway to prevent establishment of self-sustaining population in U.S. Sterile screwworm flies released: Texas 38,648,000; Arizona 3,800,000; Mexico 114,328,000. (Anim. Health Div.).

HORN FLY (Haematobia irritans) - FLORIDA - Averaged 462 per beef animal at Ona, Hardee County, April 21. (Butler); averaged 110 per dairy cow near Gainesville, Alachua County, April 30. (Head). OKLAHOMA - Ranged 200-400 per head on cattle in Payne and Major Counties. Ranged 500-1,000 per head in Delaware County. Moderate in Garvin County. Light in Cleveland County. (Okla. Coop. Sur.). MISSOURI - First adults in central area on April 4. Counts per animal in 4 herds: 12.3-18.5, 61.8-66.5, 0-96.5, and 0.3-68.0. (Thomas). ILLINOIS - Appeared on pastured cattle in southern section. Still light but could build up to economic levels, 50-100 or more per animal, within next few weeks. (Sur. Bull.).

FACE FLY (Musca autumnalis) - MISSOURI - Adults first active on cattle April 12 in central area. Counts per animal in 4 herds: 1.6-5.0, 1.5-5.3, 0-6.2, 0-6.1. (Thomas). ILLINOIS - Light on pastured cattle near wooded areas in central section. (Sur. Bull.). INDIANA - Males around barns in Tippecanoe County, averaged 5 per animal on cattle in Harrison and Washington Counties. (Sanders, Apr. 23).

COMMON CATTLE GRUB (Hypoderma lineatum) - OKLAHOMA - Adults chasing cattle in Texas County. (Okla. Coop. Sur.).

SOUTHERN HOUSE MOSQUITO (Culex pipiens quinquefasciatus) - ARKANSAS - Mainly this species 10-15 per night in New Jersey light traps at Lonoke, Lonoke County. (Meisch).

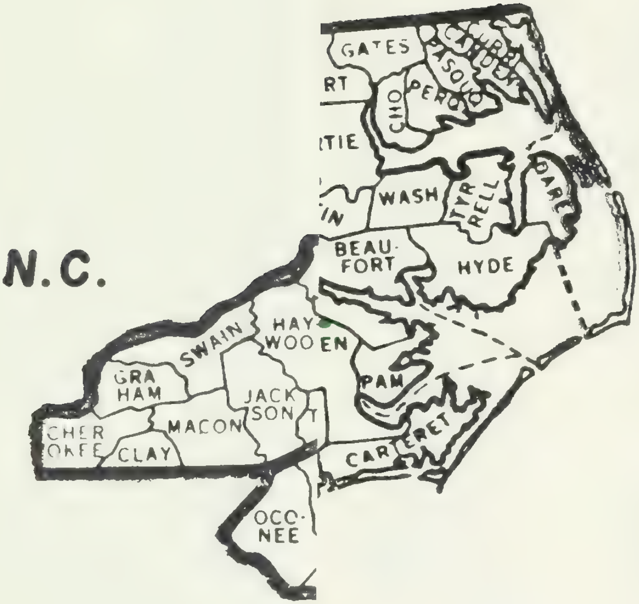
ROCKY MOUNTAIN WOOD TICK (Dermacentor andersoni) - IDAHO - Adults on humans at St. Maries and Fernwood, Benewah County, April 15-26. (Judd). Male collected from boy at Carment Creek, Lemhi County, April 19. (Loucks, Sutherland).

EAR TICK (Otobius megnini) - ARKANSAS - Three specimens from cattle in Izard County week of April 16. Determined by J.L. Lancaster. Third report of this species in State in past 10-15 years. This tick not thought to be established previously. Current information indicates this species established in Izard County. First observed on 2 adjoining farms where breeding cattle introduced from southwest U.S. about 6 years ago. (Boyer).

BENEFICIAL INSECTS

CONVERGENT LADY BEETLE (Hippodamia convergens) - ARIZONA - Averaged per 100 sweeps of safflower: 50 at Safford, Graham County; larvae 20 in Salt River Valley, Maricopa County. (Ariz. Coop. Sur.). OKLAHOMA - Counts heavy on alfalfa in Noble County. Counts per square foot by county: Texas 17-45 on alfalfa, Cimarron 15-20, Major 7-20, and Cotton 1-4. (Okla. Coop. Sur.). KANSAS - Counts per 10 sweeps in 3 fields per county: Reno and Rice 9-10 week of April 23. Currently, adults per 10 sweeps in 3 alfalfa fields per county: Montgomery 13-21, Chautauqua 7-21, Cowley 3-25, Butler 1-14, Greenwood 2-6, Sumner 1-16, Harper 10-19, Kingman 5-20, Sedgwick 2-4, Lyon 14-18, Riley 17-25, and Pottawatomie 12-18. (Bell). TENNESSEE - Adults and larvae heavy in all grain surveyed. (Gordon).

A EULOPHID WASP (Eretmocerus paulistus) - CALIFORNIA - Released 760 parasites in Aleurothrixus floccosus (woolly whitefly) infested area in 6 locations at Balboa Park, San Diego County. Additional releases soon. (Cal. Coop. Rpt.).



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
PLANT PROTECTION DIVISION
COOPERATING WITH AFFECTED STATES

CONSULT YOUR STATE OR FEDERAL PLAN
INSPECTOR OR YOUR COUNTY AGENT FOR
ASSISTANCE REGARDING EXACT AREAS U
REGULATION AND REQUIREMENTS FOR MO
REGULATED ARTICLES.

REV. DATE 2-19-71

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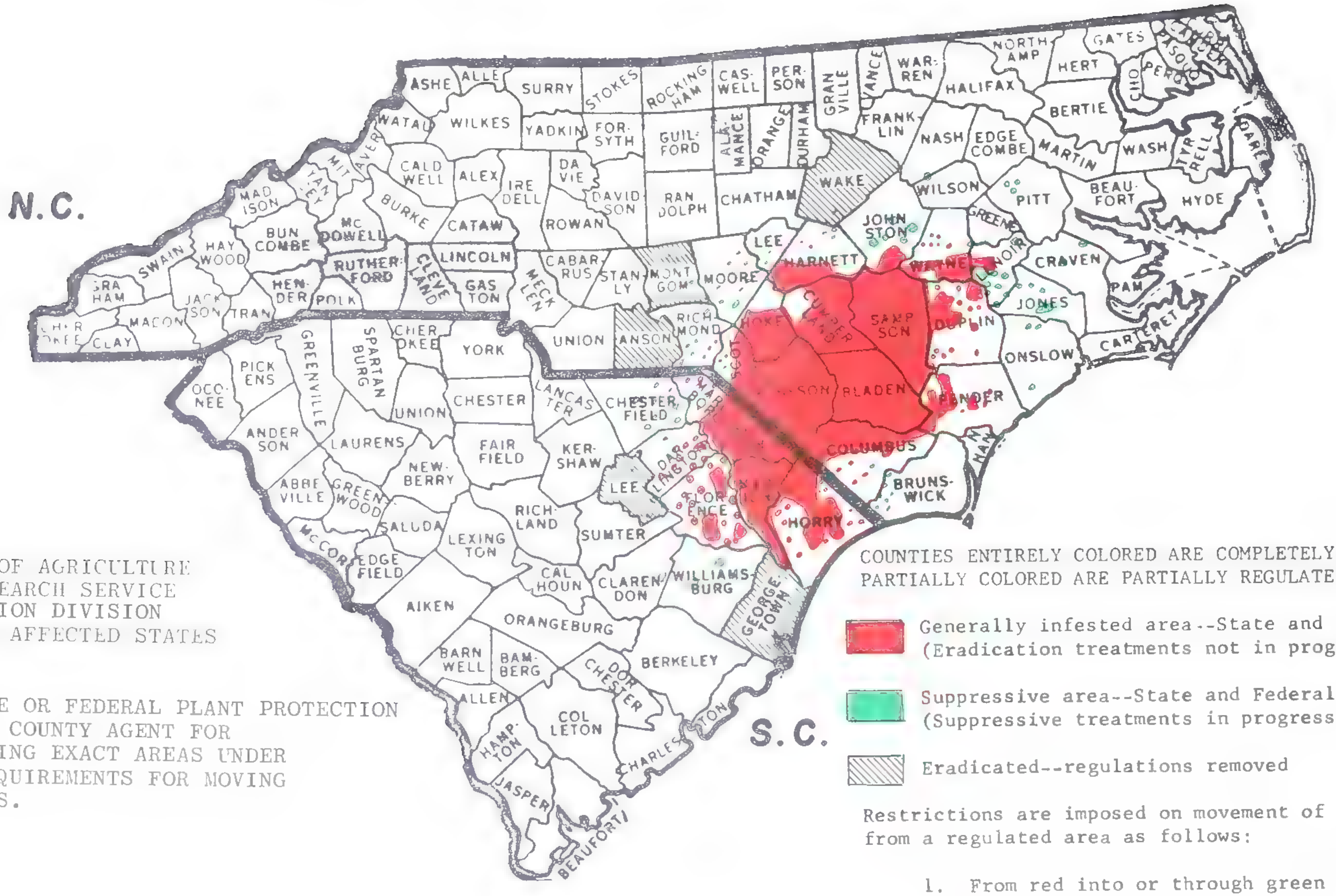

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AGRICULTURAL RESEARCH SERVICE
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COOPERATING WITH AFFECTED STATES

ONSULT YOUR STATE OR FEDERAL PLANT PROTECTION INSPECTOR OR YOUR COUNTY AGENT FOR ASSISTANCE REGARDING EXACT AREAS UNDER REGULATION AND REQUIREMENTS FOR MOVING REGULATED ARTICLES.

COUNTIES ENTIRELY COLORED ARE COMPLETELY REGULATED; COUNTIES PARTIALLY COLORED ARE PARTIALLY REGULATED.

🟥 Generally infested area--State and Federal regulations (Eradication treatments not in progress or planned)

🟩 Suppressive area--State and Federal regulations (Suppressive treatments in progress or planned)

▨ Eradicated--regulations removed

Restrictions are imposed on movement of regulated articles from a regulated area as follows:

1. From red into or through green or white.
2. From green into or through white.
3. Green into green.
4. Within green.*

*If required by an authorized inspector.

. DATE 2-19-71

SEE REVERSE SIDE FOR LIST OF REGULATED ARTICLES

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THE FOLLOWING REGULATED ARTICLES MUST BE MOVED UNDER CERTIFICATE OR PERMIT YEAR-ROUND EXCEPT AS INDICATED:

1. Soil, compost, decomposed manure, humus, muck, and peat, separately or with other things; sand; and gravel.

   Soil samples shipped to approved laboratories do not require attachment of certificate or permit.*
2. Plants with roots.
3. Grass sod.
4. Plant crowns and roots for propagation.
5. True bulbs, corms, rhizomes, and tubers of ornamental plants.
6. Root crops, except those from which all soil has been removed.

   Root crops are exempt if moving to a designated processing plant.*
7. Peanuts in shells and peanut shells, except boiled or roasted peanuts.
8. Small grains and soybeans.

   Small grains are exempt** if such grains and any containers for the grains did not come in contact with the soil during harvesting, or if they have been cleaned at a designated facility.*

   Soybeans are exempt** if such beans and any containers for the beans did not come in contact with the soil during harvesting and if such beans are moving forthwith to a designated oil mill or facility* for crushing or cleaning, or if they have been cleaned with an air-blast cleaner having a capacity of 2,500 cubic feet per minute.
9. Hay, straw, fodder, and plant litter of any kind.
10. Seed cotton, cotton lint, cotton linters, and gin trash.

    Seed cotton is exempt if moving to a designated gin.*
11. Stumpwood.
12. Long green cucumbers, cantaloupes, peppers, squash, tomatoes, and watermelons, except those from which all soil has been removed.
13. Pickling cucumbers, string beans, and field peas.

    Pickling cucumbers, string beans, and field peas are exempt** if washed free of soil with running water.

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1. Soil, compost, decomposed manure, humus, muck, and peat, separately or with other things; sand; and gravel.
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   Root crops are exempt if moving to a designated processing plant.*
7. Peanuts in shells and peanut shells, except boiled or roasted peanuts.
8. Small grains and soybeans.
   Small grains are exempt** if such grains and any containers for the grains did not come in contact with the soil during harvesting, or if they have been cleaned at a designated facility.*

   Soybeans are exempt** if such beans and any containers for the beans did not come in contact with the soil during harvesting and if such beans are moving forthwith to a designated oil mill or facility* for crushing or cleaning, or if they have been cleaned with an air-blast cleaner having a capacity of 2,500 cubic feet per minute.
9. Hay, straw, fodder, and plant litter of any kind.
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11. Stumpwood.
12. Long green cucumbers, cantaloupes, peppers, squash, tomatoes, and watermelons, except those from which all soil has been removed.
13. Pickling cucumbers, string beans, and field peas.
    Pickling cucumbers, string beans, and field peas are exempt** if washed free of soil with running water.
14. Cabbage, except firm heads with loose outer leaves removed.
15. Leaf tobacco, except flue-cured leaf tobacco.
16. Ear corn, except shucked ear corn.
    Ear corn in the shuck is exempt** if harvested without coming in contact with the soil.
17. Used crates, boxes, burlap bags, cotton picking sacks, and other used farm-products containers.
18. Used farm tools and implements.
    Used farm tools and implements are exempt** if cleaned free of soil.
19. Used mechanized cultivating equipment and used harvesting machinery.
    Used mechanized cultivating equipment and used harvesting machinery are exempt** if cleaned and repainted.
20. Used mechanized soil-moving equipment.
    Used mechanized soil-moving equipment is exempt** if cleaned and repainted.
21. Any other products, articles, or means of conveyance, of any character whatsoever, not covered by the above when it is determined by an inspector that they present a hazard of spread of witchweed and the person in possession thereof has been so notified.

*Information as to designated laboratories, facilities, gins, oil mills, and processing plants may be obtained from an inspector.

**Exempt if not exposed to infestation after cleaning or other prescribed handling.

AN ICHNEUMON WASP (Bathyplectes sp.) - NEVADA - Cocoons in weevil-infested alfalfa at Las Vegas, Clark County. (Bechtel et al.).

HONEY BEE (Apis mellifera) - WEST VIRGINIA - April inspection of 2,215 colonies found American foulbrood disease in one colony and 8 dead colonies. Survival satisfactory in all parts of State. (W. Va. Ins. Sur.).

DAMSEL BUGS (Nabis spp.) - OKLAHOMA - Ranged 0-5 per square foot of alfalfa in Cotton County. (Okla. Coop. Sur.).

A PHYTOSEIID MITE (Metaseiulus occidentalis) - WASHINGTON - Feeding on Tetranychus mcdanieli (McDaniel spider mite) eggs on apple trees at west Wapato, Yakima County. (Gregorich).

FEDERAL AND STATE PLANT PROTECTION PROGRAMS

CEREAL LEAF BEETLE (Oulema melanopus) - INDIANA - Adults 18 per 100 sweeps in 3 to 4-inch quackgrass patches in alfalfa field in Allen County, and 16 per 100 sweeps on 3-inch wheat in Noble County. (Bollinger, Apr. 23). WEST VIRGINIA - Adult collected on winter wheat in Brooke County April 27. Adults 3 per square yard, moderate feeding, on 10 percent of winter wheatfield in Jackson County April 28. Adults 3 per square yard of spring oats on 25 percent of field in Mason County. No adults in Wood County but feeding on spring oats moderate to heavy, 20-30 percent, in all fields; with only 0-5 percent damage to wheat, April 29. (W. Va. Ins. Sur.).

EUROPEAN CHAFER (Amphimallon majalis) - NEW YORK - Up to 24 grubs per square foot destroyed 90 percent of alfalfa field in Ulster County. Found in most fields of sod in Wayne County. (N.Y. Wkly. Rpt., Apr. 26).

GRASS BUGS - UTAH - Labops hesperius, Irbisia pacifica, and Irbisia spp. marking to sometimes removing all green from crested and other planted grasses over large areas of Garfield and Kane Counties. Populations in some areas 10-20 percent adult. Ranchers plan to spray 2,000-3,000 acres of private grasslands. This is fourth consecutive year that some ranchers have sprayed. (Davis, Knowlton).

MEXICAN FRUIT FLY (Anastrepha ludens) - CALIFORNIA - Detection negative in San Diego, San Diego County. (Cal. Coop. Rpt.).

INK BOLLWORM (Pectinophora gossypiella) - CALIFORNIA - Male trapped April 14 in Palo Verde Valley in Riverside County indicated moths will be emerging in desert cotton areas. Negative in sex-lure traps in San Joaquin Valley. (Cal. Coop. Rpt.).

WHITEFRINGED BEETLES (Graphognathus spp.) - ALABAMA - Larvae in Houston County destroyed 10 percent of young corn in 15-acre field near Rahoboth, 10 percent or more of sprouted but pre-emerged peanut plants in 8-acre field west of Dothan, and 2-leaf cotton in 10-acre field in west Houston County. Last field to be treated and replanted to cotton. (Stephenson, Wilson). Larvae light; destroyed stand of young soybeans in 2-acre field at Gosport, Clarke County. Damage expected to increase. (Lemons).

DETECTION

New County and Island Records - AN ARMORED SCALE (Unaspis citri) FLORIDA - Sumter. (p. 324). ALFALFA WEEVIL (Hypera postica) ARKANSAS - Izard, Newton, Lawrence, Monroe, Prairie, White, Woodruff, Cleburne, Ouachita, Union, Clark, Columbia, Nevada, Hot Spring, Garland, Perry, Saline, and Franklin. KANSAS - Kingman, Reno, Sedgwick, Harper, Sumner, Cowley, Chautauqua, Elk, Greenwood, Wilson, Riley, and Pottawatomie. OKLAHOMA - Texas, Cimarron, and Major. (pp. 320-321). A GEOMETRID MOTH (Semiothisa santaremaria) HAWAII - Maui. (p. 328). A LEAFHOPPER (Protalebrella brasiliensis) HAWAII - Maui. (p. 328). SUGARBEET ROOT MAGGOT (Tetanops myopaeformis) IDAHO - Blaine. (p. 323).

HAWAII INSECT REPORT

Fruits and Nuts - COCONUT SCALE (*Aspidiotus destructor*) remains trace in most papaya and banana fields in windward Oahu. Trace in 0.25 acre of papaya at Kahaluu; 5 percent of leaves with scattered colonies of 1-2 inches diameter, mostly on older leaves. Adults and nymphs of *Telsimia nitida* (a lady beetle) light; nil in adjacent 0.5 acre of banana. (Kawamura).

Ornamentals - A LEAFHOPPER (*Protalebrella brasiliensis*) trace on foliage of *Wedelia* sp. at Wailuku and Kaanapali, Maui. This is a new island record; previously reported from island of Oahu. (Ah Sam, Miyahira).

Forest and Shade Trees - KIAWE FLOWER LOOPER (*Cosymbia serrulata*) larvae light, averaged 1 per raceme on inflorescence of kiawe (*Prosopis pallida*) trees at Olowalu, Maui. Denuded 30 percent of inflorescence. (Davis). A NOCTUID MOTH (*Melipotis indomita*) increasing in light traps throughout Oahu past 3 months: February-41, March-125, and April-159. MONKEYPOD MOTH (*Polydesma umbricola*) larvae trace under loose bark of monkeypod trees at Punchbowl, Kapiolani Park and Boulevard, Mililani, and Barbers Point, Oahu. Most host trees at these areas apparently recovered from damage sustained in late 1970 and early 1971. At Barbers Point, of 32 pupae collected under loose bark of monkeypod trees, all emergences to date *P. umbricola*. Several parasites also emerged: 2 *Chaetogaedia monticola* (a tachinid fly) and 1 *Pimpla punicipes* (an ichneumon wasp). (Kawamura).

Beneficial Insects - ENCYRTID parasites emerged from branches of fiddlewood (*Citharexylum spinosum*) moderately infested by *Ceroplastes cirripediformis* (barnacle scale). Parasite percentages from this material collected near Honolulu International Airport, Oahu: *Coccidoxenus mexicanus* 29 percent and *Aphycus mexicanus* 71 percent. (Kawamura). Single female of an ICHNEUMON WASP (*Xanthopimpla punctata*) taken at Tantalus, Oahu. This species parasitic on pyralid and tortricid moth borers, including *Anomis flava* (hibiscus caterpillar) from which 5 male offspring of captured female emerged. (Rose). Larval percentages on koa haole branches at Barbers Point similar to previous sampling, March 9, 1971: *Semiothisa santaremaria* (a geometrid moth) 44, *Anacamptodes fragilaria* (koa haole looper) 56. Combined larval count for both species per 10 one-foot long branches dropped from 48 to 25. Declined in light traps from March's levels: *S. santaremaria* from 1,277 to 615 and *A. fragilaria* from 204 to 31. Similar declines in light traps at Barbers Point and Hickam Air Force Base, Oahu. One moth of *S. santaremaria* taken at large at Olowalu, Maui, for a new island record. Previously recorded from Oahu and Kauai. (Au et al.).

Weather of the week continued from page 318.

driest areas. Thundershowers some accompanied by strong winds and hail fell from the Missouri to Lower Ohio River Valley Saturday. Weekly precipitation totals exceed 1 inch from Mississippi to Georgia, in eastern New York, and southern New England, but were generally less than 0.50 inch over the western half of the Nation. Much of the Southwest received no rain.

TEMPERATURE: Cool weather persisted over the West and from the northern Great Plains to New England. Subfreezing temperatures occurred as far south as northern Arizona and northern New Mexico on 1 or 2 mornings. Elkins, West Virginia, registered 18° on Tuesday morning. Afternoon temperatures remained in the 40's over the northern Great Plains, but reached the high 80's across the South. A few southern localities warmed to the 90's. Cotulla and Laredo in Texas registered 99° Wednesday afternoon. West Palm Beach, Florida, registered 99° Friday afternoon. Only once has the mercury at West Palm Beach gone higher than 99°. That was in July 1942 when the temperature reached 101°. A warming trend occurred over the West late in the week. Temperatures reached the 80's in southern Washington, Oregon, and Idaho Saturday and Sunday. (Summary supplied by Environmental Data Service, ESSA).

LIGHT TRAP COLLECTIONS

	Temperature °F.	Precipitation (inches)	Type of trap BL - blacklight I - incandescent MV - mercury vapor O - other	Agrotis ipsilon (black cutworm)	Estigmene acrea (saltmarsh caterpillar)	Euxoa auxiliaris (army cutworm)	Faronta diffusa (wheat head armyworm)	Feltia subterranea (granulate cutworm)	Heliothis virescens (tobacco budworm)	H. zea (bollworm, corn earworm, tomato fruitworm)	Laspeyresia pomonella (codling moth)	Loxostege commixtalis (alfalfa webworm)	Loxostege rantalis (garden webworm)	Loxostege sticticalis (beet webworm)	Manduca quinquemaculata (tomato hornworm)	Manduca sexta (tobacco hornworm)	Ostrinia nubilalis (European corn borer)	Peridroma saucia (variegated cutworm)	Pseudaletia unipuncta (armyworm)	Spodoptera exigua (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Spodoptera ornithogalli (yellowstriped armyworm)	Trichoplusia ni (cabbage looper)	Crops
FLORIDA																								
Gainesville 4/23-29			BL	3				26		3								1	4	4		3		
IOWA																								
Napier 4/22-29			BL	10															2					
KENTUCKY																								
Lexington 4/24-26			BL																1				2	
MISSISSIPPI																								
Stoneville 4/23-29	46-87	Trace	2BL	46	1			8										24	127			4		
MISSOURI (County)																								
Pemiscot 4/17-30			BL	11														2	90					
Platte 4/22-28			BL	56														14	95			1		
NORTH CAROLINA																								
Beaufort 4/23-27			BL	1													3		3					
TENNESSEE (County)																								
Fayette 4/26-30			BL	18											1			4	26					
Haywood 4/26-30			BL	10						1							11	6	66					
Madison 4/26-30			BL	30														13	84					
TEXAS																								
Waco 4/23-30			BL	71	10			149		40								51	65	48		20	21	
WISCONSIN																								
Lancaster 4/20-27			BL																2					

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INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

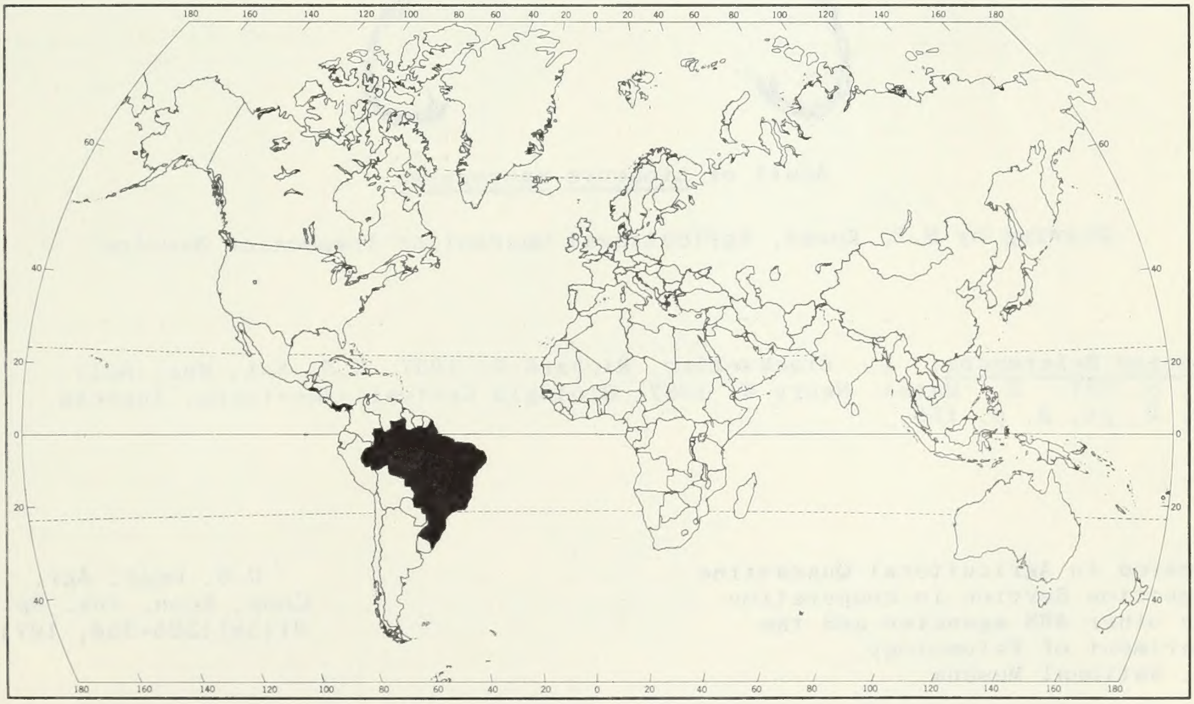
A SCARAB (Liogenys macropelma Bates)

Economic Importance: This species is frequently intercepted in aircraft from Latin America. Since the genus Liogenys is classified in the subfamily Melolonthinae, tribe Macrodactylini, it follows that L. macropelma is photyphagous in the larval stage and probably in the adult stage as well. Adults of Liogenys cribricollis are reported to attack Schinus latifolius and adults of L. tibialis are reported to feed on the foliage of peach trees in Brazil. Although L. macropelma is not listed in "Reporte Preliminar Sobre Evalucion de Perdidas Causadas por Plagas y Enfermendades en los Cultivos Basicos de Consuma Interno en la Region del OIRSA" published in 1966, there is good reason to deter its entry and establishment in the United States.

Hosts: Hosts of this scarab have not been determined nor has it been intercepted on any plant material.

Interceptions: Since 1960, live adults have been intercepted 274 times as hitchhikers on aircraft from Latin America. The infestations are believed to have originated in Brazil, Costa Rica, El Salvador, Guatemala, Panama, and Venezuela. On several occasions, more than 80 specimens have been found aboard a single aircraft. Most have arrived in April or May although interceptions date from April 8 to October 8. The majority of interceptions usually come from Panama, arriving in the morning.

Distribution: Brazil, Canal Zone, El Salvador, Panama.

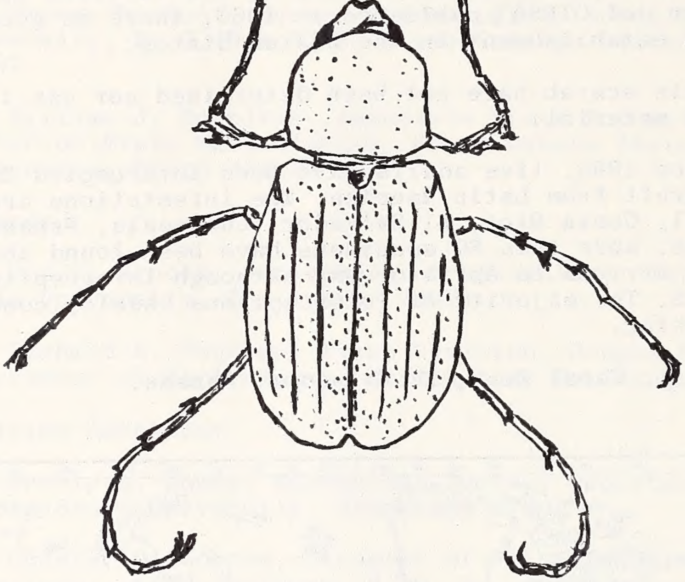


General Distribution of Liogenys macropelma Bates

(Coleoptera, Scarabaeidae) No. 188 of Series

Life History and Habits: There is not much specific information available except that the flight time of the beetle is in April. It is apparently attracted to aircraft lights and then trapped within.

Description: Adult- Length 8 mm. Elytra light brown with 3 longitudinal ridges on each side and finely punctured. Thorax dark brown and finely punctured. Prothoracic tibia with 1 short and 2 long teeth on each. First tarsal segment of prothoracic leg greatly shortened.



Adult of Liogenys macropelma

Drawing by W.T. Rowan, Agricultural Quarantine Inspection Service

Selected References: 1. Blackwelder, Richard E. 1957. U.S. Nat. Mus. Bull. 185, p. 227. 2. Bates, Henry W. 1887. Biologia Centrali-Americana, Insecta, vol. 2, pt. 2, p. 155.

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